IN THE CLAIMS

The following is a complete listing of the claims:

1. (Previously presented) A communications system for determining the position of an object, said system comprising:

an interrogator remote from the object and including circuits that:

receive GPS signals from GPS satellites;

for one of the GPS satellites associated with the GPS signals, transmit pre-positioning data for the GPS satellite, including a pseudorandom noise (PRN) code number, a Doppler frequency offset and a code phase offset and a tracking signal including reference time and frequency information; and

determine a pseudorange associated with a received correlation snapshot, wherein the correlation snapshot comprises correlator sums and a range offset in chips; and

a transponder positioned on the object and including circuits that receive:

receive the pre-positioning data and the tracking signal;

collect RF samples of the GPS signals;

correlate the RF samples of the GPS signals against replicas of a GPS signal based on the PRN code number, the Doppler frequency offset, and the code phase offset in the prepositioning data and the reference time and frequency information in the tracking signal to produce the correlation snapshot; and

transmit the correlation snapshot to the interrogator.

2. (Original) The system of claim 1 wherein the transponder comprises a two bit sampler for collecting the RF samples.

3. (Original) The system of claim 1 wherein the interrogator is further adapted to

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transmit a wake-up signal prior to transmitting the pre-positioning data and the tracking signal, and the transponder comprises:

processing circuitry; and

a power subsystem adapted to maintain the processing circuitry in a power-off mode prior to receipt of the wake-up signal.

4. (Original) The system of claim 3 wherein the wake-up signal comprises an unmodulated carrier transmitted at a higher power than the pre-positioning data and the tracking signal.

5. (Previously presented) The system of claim 3 wherein the power subsystem comprises:

a switch connected to a receiver adapted to receive the wake up signal;

a standby circuit connected to the receiver through the switch; and

a power supply control adapted to provide power to the processing circuitry and to be switched on and off by the standby circuit.

6. (Previously presented) The system of claim 5 wherein the standby circuit comprises:

a low pass filter connected to the receiver and adapted to output a voltage, the voltage increasing as a function of time in response to receipt of an RF signal at the resonant frequency of the low pass filter by the receiver; and

a comparator adapted to compare the output voltage to a threshold voltage and to trigger the power supply control an "on" mode when the output voltage is greater than the threshold voltage.

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7. (Previously presented) The system of claim 5 wherein the standby circuit comprises:

three passive tuned filters, each connected to the receiver, two of the passive tuned filters being adapted to detect continuous wave tone signals and a third one of the passive tuned filters being adapted to measure the noise and interference in the band of interest, each further adapted to output a corresponding voltage; and

a pair of comparators adapted to combine the three output voltages, compare the result to a threshold voltage and to trigger the power supply control on when the result is greater than the threshold voltage.

8. (Original) The system of claim 1 wherein the code replicas are generated by the transponder at regular offsets of some fraction of a C/A code chip.

Claims 9 – 42. (Canceled)

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